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EXAMINER				
LAUX, JESSICA L				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/571,878

**Applicant(s)**

WANG, RONGXUN

**Examiner**

JESSICA LAUX

**Art Unit**

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20 and 23-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20 and 23-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2009 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 9/18/2009 with respect to Bouchard have been fully considered but they are not persuasive. Bouchard does disclose blocks being shaped and sized such that when three analogous blocks are overlapped vertically the top of the ridge of the bottommost block is higher than a bottom foot of the uppermost block as seen in figure 12. Additionally it is noted that the structure of the block of Bouchard is the structurally equivalent to and contains all the same elements as applicant's claimed block and therefore the fact that Bouchard includes additional elements and structure is moot.

Applicant's arguments with respect to Dwyer have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 20,30, 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite the limitation "wherein said left support slope and the right supporting slope including an upper slope portion and a lower shoulder, respectively..." which is confusing as it unclear whether the left **and** right support slopes include an upper slope portion and a lower shoulder or if just the right support slope includes these features or if the left supporting slope includes an upper

slope portion and the right support slope includes the lower shoulder, or if both the left and right supporting slope include. The claim will be examined as best understood by the examiner; where the right support slope includes an upper slope portion and a lower shoulder as seen in applicant's figure 5.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 20, 23-30, 33,36 are rejected under 35 U.S.C. 102(b) as being anticipated by Bouchard et al (6108995).**

Claim 20. Bouchard discloses a block for forming a wall, wherein a plurality of analogous blocks being overlapped staggeringly and continuously in the wall, characterized in that,

said block being a longitudinally profiled member, and including a top surface, a bottom surface and two end surfaces; the cross section of the block being substantially of a shape of downward-flared recess (as seen in for example figure 2 or 14-15);

the top surface of said block having a mid ridge (generally where 15 and 18 meet as seen in figure 2) higher than two sides (generally 9, 11 of figure 2) of the surface so that a left supporting slope (generally 15) and a right supporting slope (generally at 18) being formed;

said upper surface and bottom surface being formed such that: when the block being overlapped with an analogous block thereunder to form the wall, the top surface of the underlying block being engaged with the bottom surface of the upper block, the left and right supporting slopes being used as a blocking structure and interlocking the vertically adjacent blocks (as seen in for example figures 14-15);

wherein said left supporting slope and the right supporting slope including an upper slope portion (generally at 18) and a lower shoulder (generally at 9), respectively, said shoulder having a top shoulder surface (generally at 17), a bottom shoulder surface (generally at 22), and a lateral side surface (generally at 9), the top shoulder surface, the upper slope portion and the mid ridge constituting said top surface, the bottom shoulder surface is horizontal, the bottom shoulder surface and a bottom foot on one side are at the same plane, when the block being engaged with an upper analogous block to form the wall, a projecting portion formed by the upper slope portion being engaged with a downward-flared shaped recess of the upper analogous block, the blocks being shaped and sized such that: when three analogous blocks being overlapped vertically, a top of a ridge of the bottommost block being higher than a bottom foot of the uppermost block (as seen in figures 12,13).

Claim 23. The block for forming a wall according to claim 20, wherein on either side of the block, bounded by the mid ridge, the bottom shoulder surface of the shoulder (generally 22) and the bottom foot (at the junction of elements 51 and 22) of the block being on the same plane, the top surface and the bottom surface being parallel to each other, the two end surfaces being parallel to each other, the two lateral side surfaces

being parallel to each other, the end surfaces and the lateral side surfaces being vertical to the horizontal plane (as seen in the figures).

Claim 24. The block for forming a wall according to claim 20, wherein the top of the mid ridge being sharp-angle shaped, platform shaped or arc-shaped (as seen in the figures).

Claims 25, 26, 27. The block for forming a wall according to claim 20, wherein at least one of the supporting slope and the downward-flared recess being arranged in a corrugated manner (where the supporting slope 18 has step/corrugation/roughness at 40).

Claim 28. The block for forming a wall according to claim 20, wherein said top surface having a radiation-proof plate (140) thereon, which extends out of at least one of the end surfaces, the radiation-proof plates of the adjacent blocks being connected in a manner of end to end, when the wall being formed by the blocks (as seen in figure 27).

Claim 29. The block for forming a wall according to claim 20, wherein the bottom foot on one side of the block being higher than that on the other side (as seen in for example figures 2,14-15, where the junction of 51 and 22 is lower than the junction of 11 and 20).

Claim 30. Bouchard discloses a block assembly for forming a wall comprising blocks and auxiliary blocks (155, 156,160 or 185) , wherein a plurality of analogous blocks being overlapped staggeringly and continuously in the wall, characterized in that,

said block being a longitudinally profiled member, and including a top surface, a bottom surface and two end surfaces; the cross section of the block being substantially of a shape of downward-flared recess (as seen in for example figure 2 or 14-15);

the top surface of said block having a mid ridge (generally where 15 and 18 meet as seen in figure 2) higher than two sides (generally 9, 11 of figure 2) of the surface so that a left supporting slope (generally 15) and a right supporting slope (generally at 18) being formed;

said upper surface and bottom surface being formed such that: when the block being overlapped with an analogous block thereunder to form the wall, the top surface of the underlying block being engaged with the bottom surface of the upper block, the left and right supporting slopes being used as a blocking structure and interlocking the vertically adjacent blocks (as seen in for example figures 14-15);

wherein said left supporting slope and the right supporting slope including an upper slope portion (generally at 18) and a lower shoulder (generally at 9), respectively, said shoulder having a top shoulder surface (generally at 17), a bottom shoulder surface (generally at 22), and a lateral side surface (generally at 9), the top shoulder surface, the upper slope portion and the mid ridge constituting said top surface, the bottom shoulder surface is horizontal, the bottom shoulder surface and a bottom foot on one side are at the same plane, when the block being engaged with an upper analogous block to form the wall, a projecting portion formed by the upper slope portion being engaged with a downward-flared shaped recess of the upper analogous block, the blocks being shaped and sized such that: when three analogous blocks being

overlapped vertically, a top of a ridge of the bottommost block being higher than a bottom foot of the uppermost block (as seen in figures 12,13);

the blocks being shaped and sized such that: when three analogous blocks being overlapped vertically, the vertical distance between the top of the ridge of the bottommost block and the bottom foot of the uppermost block being less than one third of the height of one block (as seen in the figures); Said blocks being engaged with the auxiliary blocks in the construction of the wall (as seen in figures 24-30).

Claim 33. Bouchard discloses a block as claimed (see above) for forming a wall having masonry joints being formed between the adjacent blocks, horizontal masonry joints being formed by the engagement between the top surfaces and the bottom surfaces, vertical masonry joints being formed by the engagement between the end surfaces, the vertically adjacent vertical masonry joints being arranged staggeringly (see figures of both references).

Claim 36. The wall according to claim 33, as disclosed by Bouchard, wherein an isolation layer (the supporting wall structure as seen in figures 24-31) being provided on one side of the wall, the isolation layer being composed of several isolation sub-layers (as seen in the figures), the isolation sub-layers being in a same layer arranged in a manner of end to end, the isolation sub-layer being arranged as a vertical layer in a lap joint, a lower isolation sub-layer being interposed between an upper isolation sub-layer and the wall, a joint between the upper isolation sub-layer being staggered with that between the lower isolation sub-layer, an air gap (as seen in figures 26,28-31) being formed between the isolation layer and the wall.



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 30-33,37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dwyer et al (1686270) in view of any one of Bouchard (6108995), Hancock (3355849), Steinhage et al (2550945), or Sill (2074813).**

Claim 30. Dwyer discloses a block assembly for forming a wall, comprising blocks and auxiliary blocks, wherein said block being a longitudinally profiled member, and including a top surface, a bottom surface and two end surfaces; the cross section of the block being substantially of a shape of downward-flared recess (as seen in the figures);

the top surface of said block having a mid ridge (9) higher than two sides of the surface so that a left supporting slope and a right supporting slope being formed (designated at 14);

said upper surface and bottom surface being formed such that: when the block being overlapped with a analogous block thereunder to form the wall, the top surface of the underlying block being engaged with the bottom surface of the upper block, the left and right supporting slopes being used as a blocking structure and interlocking the vertically adjacent blocks (as seen in figure 5);

the blocks being shaped and sized such that: when three analogous blocks being overlapped vertically, the vertical distance between the top of the ridge of the bottommost block and the bottom foot of the uppermost block being less than one third of the height of one block (as seen in figure 5),

wherein when the block being engaged with an upper analogous block to form the wall, a projecting portion formed by the upper slope portion being engaged with a downward-flared shaped recess of the upper analogous block, the blocks being shaped and sized such that: when three analogous blocks being overlapped vertically, a top of a ridge of the bottommost block being higher than a bottom foot of the uppermost block (as seen in figures 12,13);

said blocks being engaged with the auxiliary blocks in the construction of the wall (as seen in figures 1-2).

Dwyer does not disclose that the right supporting slope includes an upper slope portion and a lower shoulder, respectively, said shoulder having a top shoulder surface, a bottom shoulder surface, and a lateral side surface, the top shoulder surface, the upper slope portion and the mid ridge constituting said top surface, the bottom shoulder surface is horizontal, the bottom shoulder surface and a bottom foot on one side are at the same plane.

However it is common and well known to have blocks for assembling wall structures which have the claimed side configuration as disclosed in the US Patents 6108995, 2074813,3355849 and 2550945.

At the time the invention was made it would have been obvious to modify the side design of Dwyer to have the claimed configuration to provide a block that is easily stacked in various installation applications. Further it has been held that it would be obvious and well within the common sense of one of ordinary skill in the art to pursue and substitute known options where the predictable results would be obvious.

Claim 31. The block assembly for forming a wall according to claim 30, wherein the auxiliary block comprising three of said blocks, two of them longitudinally opposing to each other and joining, respectively, to the side of the other block; said auxiliary block being provided at the intersection between the walls, being longitudinally engaged with the blocks, and being staggeringly overlapped (as seen in figures 1-2).

Claim 32. The block assembly for forming a wall according to claim 30, wherein the auxiliary block comprising two of said blocks, the longitudinal portion of one block joining to one side of the other block so that the auxiliary blocks being in a shape of L or T (as seen in figure 1); said auxiliary block being provided at the intersection between the walls, being longitudinally engaged with the blocks, and being staggeringly overlapped (as seen in figures 1-2).

Claim 33. Dwyer discloses a block as claimed (see above) for forming a wall having masonry joints being formed between the adjacent blocks, horizontal masonry joints being formed by the engagement between the top surfaces and the bottom surfaces, vertical masonry joints being formed by the engagement between the end surfaces, the vertically adjacent vertical masonry joints being arranged staggeringly (see figures of both references).

Claim 37. The wall according to claim 33, as disclosed by Dwyer, wherein said block being in a shape of a elongated plate (as seen in the figures), a miter wall being formed by staggeringly overlapping the elongated blocks, a vertical masonry joint being formed by the connection of the end surfaces of two blocks, the vertically adjacent vertical masonry joints being disposed in a stagger manner, the end of the elongated block being supported on a supporting member (as seen in figures 1-2).

**Claims 34-35 rejected under 35 U.S.C. 103(a) as being unpatentable over Gravier et al (5623797) in view of Dwyer et al (1686270) or Bouchard et al (6108995).**

Claim 34. Dwyer or Bouchard disclose blocks for forming a wall according to claim 33 above, but do not expressly a pillar being provided in the wall, at least one outward-extending piece being provided on said pillar.

Gravier discloses a wall made of blocks including a pillar (generally 74) and having an outward extending piece (the first block extending out from the pillar) provided on the pillar similar to the blocks, where one end surface of the outward-extending piece being engaged with the pillar; the other end surface of the outward-extending piece being engaged with the blocks, the top surface of the outward-extending piece being engaged with the bottom surface of the upper block, the bottom surface of the outward-extending piece being engaged with the top surface of the underlying block, a plurality of outward-extending pieces being arranged separately and orderly on the pillar, said outward-extending pieces being engaged with the staggeringly overlapped blocks adjacent to the pillar.

At the time the invention was made it would have been obvious to modify the wall of Gravier to have a block and outward extending piece with a shape and design as disclosed by Dwyer or Bouchard to provide a wall with blocks having a solid connection. Further it is noted that one of ordinary skill in the art would have had the common sense and ability to pursue known options and substitute one for another to achieve a desired and predictable result. Therefore the substitution of one known block design for another is not considered novel but rather obvious.

Claim 35. The wall according to claim 33, wherein girders (20) being provided in the wall, a projecting piece (as noted in claim 34 above, where the projecting piece is the first block to engage the pillar) being provided on a top surface of one girder, a lower surface of the projecting piece being engaged with the top surface of the girder, the projecting piece extending to the pillar at a nodal point of two adjacent beam/pillar, and engaging with the pillar, the projecting piece being engaged with the downward-flared recess of the block (where a block would be placed above); a groove being provided on a bottom surface of another girder, the groove extending to the pillar at the nodal point of two adjacent beams, the groove being engaged with the top surface of the block, when the block engaging with the bottom surface of the girder (as seen in the figures).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA LAUX whose telephone number is (571)272-8228. The examiner can normally be reached on Monday thru Thursday, 9:00am to 5:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571-272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Richard E. Chilcot, Jr./  
Supervisory Patent Examiner, Art Unit 3635

/J. L./  
Examiner, Art Unit 3635